OIPE IAP97
APR 10 2007
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

CARTER et al. Atty. Ref.: 51-575; Confirmation No. 7887

Appl. No. 10/500,613 TC/A.U. 1635

Filed: November 16, 2004 Examiner: Gibbs

For: USE OF DSRNAS IN STRATEGIC THERAPEUTIC INTERVENTION OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY

* * * * * * * * * * * *

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION OF WILLIAM A. CARTER, M.D.

I, William A. Carter, hereby declare and state as follows:

1. I am one of the co-applicants in respect of the above-identified application and that my residence is as indicated in the application papers.

2. I am the patentee of U.S. patent 4,950,652 as well as several other U.S. patents and the author of numerous articles relating, among other topics, to the treatment of HIV infections as evidenced, for instance, in my curriculum vitae, a copy of which is attached.

3. That I am familiar with the Official Action of October 10, 2006 and, in particular, the examiner's comments directed to my U.S. patent 4,950,652 and I wish to address the examiner's comments in this declaration.

4. The procedures described in my '652 patent employed various anti-retroviral agents including azidothymidine (AZT) and ribavarin as well as various other anti-retroviral products. The procedures described in my '652 patent employ, in combination, an anti-retroviral agent or agents and a DsRNA, specifically Ampligen®. According to the therapy at the time of this patent, in the early 1990s, therapy was instituted using a combination of the anti-retroviral agent(s) and was continued over a period of time until patients developed toxicity or their HIV showed resistance.

5. That according to my '652 patent, therapy was continued until the relevant end point was achieved and was not discontinued then resumed at a later point.

6. The subject application is directed to a very different situation in which an aggressive anti-viral treatment course is administered, a treatment so rigorous that significant cumulative toxicities develop, including hepatitis and pancreatitis.

7. As explained in the subject application, we have found that once HAART therapy is discontinued with a strategic therapeutic interruption (STI) beneficial results have been obtained when during this period a DsRNA administered as the sole therapeutic intervention. Then if and when HIV load increases, HAART therapy is resumed along with the continued use of a DsRNA.

8. This form of therapy differs significantly from that practiced in the late 80's and early 90's in which anti-viral therapy once instituted was continued for long periods of time and there was no strategic or other kind of planned "interruption" or "intervention" in the regimen of therapy.

9. If a person evaluating the subject application were to conclude that DsRNA therapy is basically interchangeable with any other type of anti-retroviral, this person would be mistaken. In fact, a DsRNA is an anti-viral and immune-stimulating agent which allows the control of HIV for significant periods of time (while subjects remain off HAART therapy, the "interruption"). This dsRNA "intervention" allows recovery from HAART related toxicity while controlling rebound of HIV.

10. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

DATE: 4/6/07 William A Carter

William A. Carter, M.D.

OIPE IAP97
APR 10 2007
PATENT & TRADEMARK OFFICE

Curriculum Vitae of William A. Carter, M.D.

Chairman and Chief Executive Officer
HEMISPHERx BIOPHARMA, INC.
1617 JFK Boulevard
Philadelphia, PA 19103
(215) 988-0080

Academic Appointments:

University:
Professor of Oncology and Hematology,
Allegheny University Hospitals (1980-1998)

Institute:
Director of Clinical Research,
The Institute for Cancer and Blood Diseases

Office:
The Institute for Cancer and Blood Diseases
Allegheny University Hospital
Broad and Vine
Philadelphia, Pennsylvania 19102

Personal and Family:

Date of Birth: February 28, 1938
Place of Birth: Norfolk, Virginia
Marital Status: Married

Education and Military Experience:

1954-56	Mathew Maury High School, Norfolk, VA; Valedictorian
1956-59	Trinity College, Duke University, Durham, NC
1960	B.S., Chemistry, Trinity College, Duke University, Durham, NC
1959-63	Duke University School of Medicine
1963	M.D., Duke University School of Medicine
1963-64	Intern, Medicine, Duke Hospital
1964-65	Fellow, Medicine, Research Training Program Departments of Medicine and Biochemistry, Duke University
1965-67	Senior Assistant Surgeon, U.S. Public Health Service, assigned to National Institutes of Health. Served as Research Associate, Laboratory of Biology and Viruses, Biochemistry and Biophysics Section, National Institute of Allergy and Infectious Diseases
1967-72	Visiting Physician, Baltimore City Hospitals
1967-68	Senior Assistant Resident, Osler Medical Service, Johns Hopkins Hospital
1967-68	Fellow in Medicine, Johns Hopkins University School of Medicine
1967-72	Assistant Professor of Medicine, Johns Hopkins University School of Medicine
1968-72	Assistant Professor of Microbiology, Johns Hopkins University School of Medicine
1968-72	Assistant Physician, Outpatient Department, Johns Hopkins Hospital
1972-78	Chairman, Department of Microbiology, State University of New York at Buffalo, Roswell Park Division
1972-80	Professor of Microbiology, State University of New York at Buffalo, Roswell Park Division
1972-80	Attending Physician, Roswell Park Memorial Institute and Erie County Medical Center
1972-80	Director, Department of Medical Viral Oncology, Roswell Park Memorial Institute

1975-80	Professor of Medicine, State University of New York at Buffalo
1980-	Professor of Oncology and Hematology, Allegheny University Hospital
1980-	Director of Clinical Research, The Institute for Cancer and Blood Diseases
1983-86	Senior Associate, Division of Biophysics, Johns Hopkins University

Membership in Professional Societies:

1963	Alpha Omega Alpha
1968	American Federation of Clinical Research
1970	American Society of Microbiology
1972	Biophysical Society
1972	American Association of Cancer Research
1973	American Society of Biological Chemists
1974	American Society for Clinical Investigation
1974	New York State Society of Internal Medicine

Certification:

1969	American Board of Internal Medicine
1973	Fellow, American College of Physicians

Medical Licensure:

States of New York, Maryland, North Carolina and Pennsylvania

Honors:

1960-62	Pre-Doctoral Fellow, National Foundation for Infantile Paralysis
1969-72	Research Career Development Awardee, National Institutes of Health
1971	Visiting Lecturer, Katholieke Universiteit te Leuven
1972	Visiting Lecturer, Gordon Research Conference on Medicinal Chemistry
1972	Visiting Lecturer, Austrian Academy of Biochemistry
1972	Visiting Lecturer, Hungarian Academy of Science and Institute for Cultural Relations
1972	Visiting Lecturer, U.S.S.R. Academy of Science
1972	Fellow, American College of Physicians
1978	1st NATO Advanced Studies Institute, "Antiviral Mechanisms and Control of Neoplasi," Corfu, Greece; (Co-Convenor)
1978	Meadowbrook Hall Lecturer
1979	Advances in Research Lecturer, American Cancer Society Annual Crusade (N.Y. State Division)
1982-	Advisory Board, Institute of Medical Sciences, Academia Sinica, Republic of China, Taipei, Taiwan.
1984	Presentation before U.S. Congress on "Cancer Prevention" at Congressional Clearinghouse on the Future.

Research Interests:

Cancer Chemotherapy, Viral Chemotherapy, Biochemical Virology, Molecular Biology, Molecular Immunology.

Clinical Interests:

Cancer Chemotherapy, Infectious Diseases with Emphasis on Viral Chemotherapy

Consultantships:

1971 Member, Ad Hoc Committee on Antiviral Substances, National Institutes of Allergy and Infectious Diseases
1972-88 Consultant, Cancer Centers Program, National Cancer Institute
1973-90 Editor, Selective Inhibitors of Viral Functions (Chemical Rubber Company, Publisher); 8 printings through 1981.
1974-80 Editorial Board, Medikon
1975-79 Member, Developmental Therapeutics Study Section, National Cancer Institute
1978-80 Member, American Cancer Society National Advisory Committee, Interferon Programs
1984-88 Co-Editor, Handbook of Experimental Pharmacology on Interferon (Springer-Verlag, Publisher). 575 pages, first edition in 1984.

Scientific Publications:

Carter, W.A. and Estes, E. H. Electrocardiographic manifestations of ventricular hypertrophy: a computer study of ekg anatomical correlations of 319 cases. Amer. Heart J., 68: 173, 1964.

Carter, W.A., Becker, R.F., King, J.E. and Barry, W.F. Intrauterine respiration in the rat fetus, 11. Analysis of Roentgenological Techniques, Amer. J. Obstet. Gynec., 90: 247, 1964.

Mengel, C.E. and Carter, W.A. Geophagia diagnosed by roentgenograms. JAMA, 187: 955, 1964.

Mengel, C.E., Carter, W.A. and Horton, E.S. Geophagia with iron deficiency anemia. Cachexia Africans. Arch. Intern. Med., 114: 474, 1964.

Carter, W.A. and McMarty, K.S. The molecular loci of antibiotic action. Ann. Intern. Med., 64: 1087,1966.

McCarty, K.S., Carter, W.A., Laszlo, J. and Parsons, J.T. Psynthetic capacities of liver nuclear subfiractions. J. Biol. Chem., 421: 5489, 1966.

Friedman, R., Levy, H.B. and Carter, W.A. Replication of an arbovirus. I. forms of viral RNA. Proc. Natl. Acad. Sci. USA, 56: 440, 1966.

Carter, W.A., Levy, H.B. and Diamond, L.S. Protein synthesis by amoebal ribosomes. Nature, 213: 722, 1967.

Carter, W.A. and Levy, H.B. The interaction of mammalian ribosomes with cellular and viral RNAs. Arch. Biochem, 120: 563, 1967.

Carter, W.A. and Levy, H.B. Ribosomes: The effect of interferon on their interaction with viral RNA. Science, 155: 1254, 1967.

Friedman, R.M., Fantes, K., Levy, H.B. and Carter, W.A. Interferon action on parental semliki forest virus. J. Virol, 1: 1168, 1967.

Levy, H.B. and Carter, W.A. The molecular basis of interferon action. J. Molec. Biol., 31: 561, 1968.

Carter, W.A. and Levy, H.B. The recognition of viral rna by mammalian ribosomes: An effect of interferon. Biochem. Biophys. Acta., 155: 437, 1968.

Carter, WA. Interferon: Evidence for subunit structure. Proc. Nat. Acad. Sci. USA, 67: 620, 1970.

Carter, W.A., Hande, K.R., Essien, B., Prochownik, E. and Kaback, M.M. Comparative production of interferon by human fetal, neonatal and maternal cells. Infection and Immunity, 3: 671, 1971.

Pitha, P.M. and Carter, W.A. The DEAE dextran: Polyriboinosinate-polyribocytidylate complex: Physical properties and interferon induction. Virology 45: 777, 1971.

Carter, W.A. Purification of mouse and human interferons: Detection of Subunit structures. Preparative Biochemistry, 55, 1971.

Pitha, P.M. and Carter, W.A. Antiviral activity produced by the polycytidylic acidhexainosinate system. Nature New Biology, 234: 105, 1971.

Brockman, W.W., Carter, W.A., Li, L.H., Reusser, F. and Nichol, R.F. The streptovaricins inhibit RNA dependent DNA Polymerase present in an oncogenic RNA virus. Nature, 230: 249, 1971.

Carter, W.A., Brockman, W.W. and Borden, E.C. Streptovaricins inhibit focus formation by MSV(MLV) complex. Nature New Biology, 232: 214,1971.

Borden, E.C., Brockman, W.W. and Carter, W.A. Selective Inhibition by streptovaricin of rauscher leukemia virus-induced splenomegaly. Nature New Biology, 232: 214, 1971.

Carter, WA. Interferon: Enhanced synthesis and action in mouse and human cells under suboptimal growth conditions: Johns Hopkins Med. Jour., 130: 166, 1972.

Carter, W.A., Pitha, P.M., Marshall, L.W., Tazawa, I., Tazawa, S and Ts'o, P.O.P. structural requirements of the rln.rcn Complex for induction of human interferon. J. Molec. Biol., 70:567, 1972.

Pitha, P.M., Marshall, L.W. and Carter, WA. Interferon induction: Rate of cellular attachment of poly IC. J. Gen. Virol., 15: 39, 1972.

Carter, W.A., Pitha, P.M., Brockman, W.A., Borden, E.C. and Marshall, L.W. Selective inhibitors of viral function: The antiviral action of interferon and streptovaricin. Medicine, 51: 181, 1972.

Marshall, L.W., Pitha, P.M. and Carter, W.A. Mechanisms of interferon inactivation: The effect of protonation. Virology, 48: 607, 1972.

Borden, E.C. and Carter, W.A. Viral Chemotherapy: Its promise and problems. Medicine, 51: 189, 1972.

Pitha, P.M., Marshall, L.W. and Carter, W.A. Interferon: The dissociation of rln.rCn induced proteins by protonation. J. Gen. Virol., 21: 169, 1973.

Carter, W.A. Chemotherapy of human oncogenic viral infections: The possible role of interferon and reverse transcriptase inhibitors. J. Surg. Onc., 5: 113, 1973.

Chadha, K.C., Davey, M.W., Byrd, D.M. and Carter, WA. Differential production of interferon and refractoriness inducing principle in newcastle disease virus infected L929 cells. Infection and Immunity, 10: 1057, 1974.

Horoszewicz, J.S., Byrd, D.M., Sokal, J.E. and Carter, W.A. The colony-forming cell in the normal and leukemic host: Responses to streptovaricin and rifamycin SV. J. Nat. Cancer Inst, 52: 649, 1974.

Horoszewicz, J.S. and Carter, W.A. Responses of the murine myeloic colony-forming cell to ansamycin antibiotics. Antimicrobial Agents and Chemotherapy, 196, 1974.

Borden, E.C., Carter, W.A., Sensenbrenner, L.L., Owens, A.H., Lichtenstein, J., Gray, G.D., Neil, G., Nichol, F.R. and Li, L.H. Inhibition by streptovaricins of rauscher leukemia virus splenomegaly. Intern. J. Cancer, 14: 817, 1974.

Arya, S.K., Carter, W.A., Alderfer, J.L. and Ts'o, P.O.P. Inhibition of RNA directed DNA polymerase of murine leukemia virus by 2'-O-alkylated polyadenylic acid. Biochem. Biophys. Res. Comm., 59: 608, 1974.

Carter, W.A. and DeClercq, E. Viral Infection-Host Defense: Modulatory role of double stranded RNA. Science, 186: 1172, 1974.

Huang, J.W., Davey, M.W., Hejna, C.J., von Muenchhausen, W., Sulkowski, E. and Carter, W.A. Selective binding of human interferon to albumin immobilized on agarose. J. Biol. Chem., 249: 4665, 1974.

Davey, M.W., Huang, J.W., Sulkowski, E. and Carter, W.A. Hydrophobic interaction of human interferon with concanavalin A-agarose. J. Biol. Chem., 249: 6354, 1974.

Horoszewicz, J.S., Leong, S.S., Byrd, D.M. and Carter, W.A. Antivirion effects of streptovaricin complex against friend virus. Antimicrobial Agents and Chemotherapy, 6:594, 1974.

Borden, E.C., Prochownik, E.W. and Carter, WA. The interferon refractory state: 11. biological characterization of a refractoriness-inducing protein. Journal of Immunology, 114:752-756, 1975.

O'Malley, J. Al-Bussam, N., Beutner, K., Wallace, H.J., Gailani, S., Henderson, E.S. and Carter, W.A. Cytomegalovirus infection in an adult with acute myelocytic leukemia: Antiviral (interferon and antibody) responses. New York State Journal of Med. 75: 738, 1975.

Sclair, M., Byrd, D.M. and Carter, W.A. Inhibition of RNA-dependent DNA polymerase reaction by 6-(p-hydroxyphenylazo)-uracil: A result of drug-induced dithiothreitol oxidation. Res. Commun. Chem. Path. and Pharm., 10: 525, 1975.

Arya, S.K., Carter, W.A., Alderfer, J.L. and Ts'o, P.O.P. Inhibition of murine leukemia virus replication in cell culture and spleen focus formation in mice by polyadenylic acids. Mol. Pharmacol, 11: 501, 1975.

Horoszewicz, J.S., Rinehart, K.L., Jr., Leong, S.S. and Carter, W.A. Activity of pure streptovaricins and fractionated streptovaricin complex against friend virus. Antimicrobial Agents and Chemotherapy, 7: 281, 1975.

Arya, S.K., Carter, W.A., Zeigel, R.F. and Horoszewicz, J.S. The search for "virogene" in human prestatic tissues: Prestatic DNA polymerases. Cancer Chemotherapy Reports, 59:39, 1975.

O'Malley, J.A., Ho, Y.K., Chakrabarti, P., DiBerardino, L.A., Chandra, P., Byrd, D.M., Bardos, T.J. and Carter, W.A. Antiviral activity of partially thiolated polynucleotides. Molec. Pharm. 11: 61, 1975.

Horoszewicz, J.S., Leong, S.S. and Carter, W.A. Friend leukemia: Rapid development of erythropoietin-independent hemopoietic precursors. J. Nat, Cancer Institute, 4: 265, 1975.

Davey, M., Sulkowsld, E. and Carter, W.A. Hydrophobic binding sites on human interferon. J. Biol. Chem. 250: 248, 1975.

Arya, S.K., Carter, W.A., Alderfer, J.L. and Ts'o, P.O.P. Inhibition of RNA directed dna polymerase of murine leukemia virus by polyribonucleotides and their 2'-O-methyl derivatives. Molec. Pharm. 11: 421, 1975.

Huang, J.W., Hejna, C.I., Sulkowski, E., Carter, W.A., Silver, G.H. Munayyer, H. and Came, P. The human interferon-albumin interaction: The influence of albumin conformation. Virology, 65: 268, 1975.

Jankowski, W.J., Davey, M.W., O'Malley, J.A., Sulkowski, E. and Carter, W.A. Molecular structure of human fibroblast and leukocyte interferons: Probe by lectin and hydrophobic chromatography. J. Virol. 16: 1124-1130, 1975.

Ts'o, P.O.P., Alderfer, J.L., Levy, J., Marshall, L.W., O'Malley, J., Horoszewicz, J. and Carter, W.A. An integrated and comparative study of the antiviral effects and other biological properties of the rIn.rCn duplex and its mismatched analogs. Molec. Pharm., 12:299-312, 1976.

Carter, W.A., O'Malley, J., Beeson, M., Cunnington, P., Kelvin, A., Vere-Hodge, A., Alderfer, J.L. and Ts'o, P.O.P. An integrated and comparative study of the antiviral effects and other biological properties of the rIn.rCn duplex and its mismatched analogs. III. chronic effects, immunologic features. Molec. Pharm., 12: 440-453, 1976.

Davey, M.W., Sulkowski, E. and Carter, W.A. The binding of human fibroblast interferon to concanavalin A-agarose: Involvement of carbohydrate recognition and hydrophobic interaction. Biochemistry, 15: 704-713, 1976.

Sulkowski, E., Davey, M.W. and Carter, W.A. Interaction of human interferons with immobilized hydrophobic aminio acids and dipeptides. J. Biol. Chem., 251: 5381-5385, 1976.

Davey, M.W., Sulkowski, E. and Carter, W.A. Purification and characterization of mouse interferon with novel affinity sorbents. J. Virol, 17: 439-445, 1976.

Arya, S.K., Carter, W.A., Alderfer, J.L., and Ts'o, P.O.P. Inhibition of the synthesis of murine leukemia virus in cultured cells by polyribonucleotides and their 2'-O-alkylated derivatives. Molec. Pharm., 12: 234-241, 1976.

Arya, S.K., Ziegel, R.F., Horoszewicz, J.S. and Carter, W.A. RNA tumor virus-like activities in human solid tissues: Endogenous RNA-DNA polymerase activities in the prostate. J. Surg. Onc., 8: 321-322, 1976.

Chen, J.K., Jankowsld, W.J., O'Malley, J.A., Sulkowski, E. and Carter, W.A. The nature of the molecular heterogeneity of human leukocyte interferon: J. Virol., 19: 425-434, 1976.

Arya, S.K., Helser, T.L., Carter, W.A. and Ts'o, P.O.P. Polyxanthylic and polyguanylic acid inhibition of murine leukemia virus activities. Molec. Pharm., 12: 844-853, 1976.

Jankowski, W.J., von Muenchhausen, W., Sulkowski, E. and Carter, W.A. The binding of human interferon to immobilized cibacron blue F3GA: The nature of molecular interaction. Biochemistry, 15: 5182-5187, 1976.

Davey, M.W., Sulkowski, E. and Carter, W.A. Hydrophobic interaction of human, mouse and rabbit interferons with immobilized hydrocarbons. J. Biol. Chem., 251: 7620-7625, 1976.

Milavetz, B.I. and Carter, W.A. Streptovaricins. Pharm. Ther. A, 1: 289-305, 1977.

Arya, S.K., Job, L., Horoszewicz, J.S. and Carter, W.A. RNA tumor virus-like activities in human prostate: Possible novel pharmacologic approaches. Cancer Treatment Reports, 61: No. 2, 113-117, 1977.

Zeigel, R.F., Arya, S.K., Horoszewicz, J.S. and Carter, W.A. A status report: Human prostatic carcinoma with emphasis on a potential for viral etiology. Oncology, 34(1): 29-44, 1977.

Mayhew, E., Papahadjopoulos, D., O'Malley, J., Carter, W.A. and Vail, WJ. Cellular uptake and protection against virus infection by poly I.Poly c entrapped within phospholipid vesicles. Molec. Pharm., 13: 488-495, 1977.

Milavetz, B.I., Horoszewicz, J.S., Evans, M.J., Manly, K.F., Rinehart, Jr., K.L. and Carter, W.A. Reverse transcription, a probe by the imobilized template poly (adenylic acid)agarose. Molec. Pharm. 13: 496-503, 1977.

Horoszewicz, J.S., Leong, S.S. and Carter, W.A. Differential susceptibility of spleen focusforming virus and murine leukemia viruses to ansamycin antibiotics. Antimicrob. Agents and Chemo., 12: 4-10, 1977.

Freeman, A.D., Al-Bussam, N., O'Malley, J.A., Stutzman, L., Bjomsson, S., Carter, W.A. Pharmacologic effects of polyinosinic-polycytidylic acid in man. J. Med Virol, 1: 79-93, 1977.

Buffett, R.F., Ito, M., Cairo, A.M. and Carter, W.A. Antiproliferative activity of highly purified mouse interferon. J. Nat. Cancer Inst., 60: 243-246, 1978.

Chadha, K.C., Sclair, M., Sulkowski, E. and Carter, W.A. Molecular size heterogeneity of human leukocyte interferon. Biochemistry, 17: 196-200, 1978.

Milavetz, B.I., Horoszewicz, J.S., Rinehart, Jr., K.L. and Carter, W.A. A study of ansamycin inhibition of an RNA-directed DNA-polymerase by an immobilized template assay. Antimicrob. Agents Chemother., 13: 435-440, 1978.

Horoszewicz, J.S., Leong, S.S., Ito, M., DiBerardino, L. and Carter, W.A. Aging in vitro and large scale interferon production by 15 new strains of human diploid fibroblasts. Infection and Immunity, 19: 720-726, 1978.

Zarling, J.M., Sosman, J., Borden, E.C., Horoszewicz, J.S. and Carter, W.A. Enhancement of cytotoxic t cell responses by purified human fibroblast interferon. J. Immunol., 121: 2002-2004, 1978.

Green, J.J., Alderfer, J.L., Tazawa, I., Tazawa, S., Ts'o, P.O.P., O'Malley, J.A. and Carter, W.A. Interaction of rIn.rCn with its interferon induction receptor: Dependence on primary and secondary structures. Biochemistry, 17: 4214-4220, 1978.

O'Malley, J.A. and Carter, W.A. Human Interferons: Characterization of the major molecular components. J. Reticuloendothelial Society, 23: 299-305, 1978.

Carter, W.A. and Horoszewicz, J.S. Clinical overview of human interferon program. Cancer Treatment Reports, 62: 1897-1898, 1978.

Horoszewicz, J.S., Leong, S., Ito, M., Buffett, R.F., Karakousis, C., Holyoke, E., Dolen, J.G. and Carter, W.A. Human fibroblast interferon in human neoplasia: Clinical and laboratory studies. Cancer Treatment Reports, 62: 1899-1906, 1978.

Heine, J.W., Mikulski, A.J., Sulkowski, E. and Carter, W.A. Stabilization of human fibroblast interferon purified on concanavalin A-sepharose. Arch. Virol, 57: 185-188, 1978.

Job, L., Carter, WA. and Aqa, S.Y. Reverse transcriptase activity in extracts of human prestatic tissues. Oncology, 35(5): 202-205, 1978.

Mizrahi, A., O'Malley, J.A., Carter, W.A., Takatsuki, A., Tamura, G. and Sulkowsld, E. Glycosylation of Interferons: Effects of tunicamycin on human immune interferon. J. Biol. Chem., 253: 7612-7615, 1978.

Arya, S.K., Job, L., Carter, W.A. and Horoszewicz, J.S. Oncornavirus-like particles released by human prostatic explant cultures. Oncology, 36: 248-253, 1979.

Chawda, R., Job, L., Carter, W.A., Horoszewicz, J.S. and Arya, S.K. Effect of bromodeoxyuridine and interferon on cellular and viral functions in human prostatic cells. Oncology, 36: 35-39, 1979.

Dolen, J.G., Carter, W.A., Horoszewicz, J.S., Vladutiu, A.O., Leibowitz, A.I. and Nolan, J.P. Fibroblast interferon treatment of a patient with chronic active hepatitis: Increased number of circulating T lymphocytes and elimination of rosette-inhibitory factor. Am. J. Med., 67: 127-131, 1979.

O'Malley, J.A., Leong, S.L., Horoszewicz, J.S., Carter, W.A., Alderfer, J.L. and Ts'o, P.O.P. Polyinosinic acid-polycytidylic acid and its mismatched analogues: Differential effects on human cell function. Molec. Pharm., 15: 165-173, 1979.

Carter, W.A., Dolen, J.G., Leong, S.S., Horoszewicz, J.S., Vladutiu, A.O., Leibowitz, A.I. and Nolan, J.P. Purified human fibroblast interferon in vitro: Skin reactions and effect on bone marrow precursor cells. Cancer Letters, 7: 243-249, 1979.

Carter, W.A. Bypassing the "Species barrier" with carbohydrate-deficient interferon from animal leukocytes. Cancer Research, 39: 3796-3798, 1979.

Carter, W.A., Davis, L.R., Chadha, K.C. and Johnson, F.C., Jr. Porcine leukocyte interferon and antivital activity in human cells. Molec. Pharm., 15: 685-690, 1979.

Zarling, J.M., Eskra, L., Borden, E.C., Horoszewicz, J.S. and Carter, W.A. Activation of human natural killer cells cytotoxic for human leukemia cells by purified interferon- L. Immunol., 123: 63-70,1979.

Carter, W.A. Glycosylation, intraspecies molecular heterogeneity and trans-species activity of mammalian interferons. Life Sciences 25: 717-728, 1979.

Horoszewicz, J.S., Leong, S.S. and Carter, W.A. Non-cycling tumor cells are sensitive targets for the antiproliferative activity of human interferon. Science, 206: 1091-1093, 1979.

Carter, W.A. Mechanisms of cross-species activity of mammalian interferons. Pharm. Ther., 7: 245-252, 1979.

Carter, W.A. and Horoszewicz, J.S. Production, purification and clinical application of human fibroblast interferon. Pharm. Ther., 8: 359-377, 1980.

Havell, E.A. and Carter, W.A. Glycosylation of interferons: Effects of tunicamycin on physical properties and antivital activities of murine L cell interferon. Virology, 108: 8086, 1981.

Zarling, J.M., Schlais, J., Eskra, L., Greene, J.J., Ts'o, P.O.P. and Carter, W.A. Augmentation of human natural killer cell activity by polyinosinic acid-polycytidylic acid and its nontoxic mismatched analogues. J. Immunol. 124: 1852-1857, 1981.

Lin, S.L., Greene, J.J., Ts'o, P.O.P. and Carter, W.A. Sensitivity and resistance of human tumor cells to interferon and $rI_n.rC_n$. Nature, 297: 417-419, 1982.

Cook, A.W., Carter, W.A., Nidzgorski, F. and Akhtar, L. Extraordinary sensitivity of human neural tumor cells to human fibroblast (beta) interferon. Science, 219: 881-883, 1983.

Gillespie, D.H. and Carter, W.A. Concerted evolution of human interferon alpha genes. Journal of Interferon Research, 3: 83-88, 1983.

Gillespie, D., Pequignot, E. and Carter, W. Evolution of interferon Genes. Handbook Exptl. Pharmacol., 71:46-63, 1983.

Strayer, D.R., Carter, W.A., Mayberry, S.D., Pequignot, E. and Brodsky, I. Low natural killer cell cytotoxicity of peripheral bood mononuclear cells in individuals with high familial incidences of cancer. Cancer Research, 44: 370-374, 1984.

Strayer, D.R., Weisband, J., Carter, W.A. and Brodsky, I. Antiproliferative effect of natural beta interferon on tumor cells analyzed in clonogenic assays. Journal of Interferon Res., 4: 627-633, 1984.

Strayer, D.R., Carter, W.A., Brodsky, I., Curley, R.M. and Gain, T. Carcinoid tumor response to fibroblast interferon (letter to editor). JAMA, 251: 1682-1683, 1984.

Hubbell, H.R., Kvalnes-Krick, K., Carter, W.A., and Strayer, D.R. Antiproliferative and immunomodulatory actions of β-interferon and double-stranded RNA, individually and in combination, on human bladder tumor xenografts in nude mice: Cancer Research, 45: 2481-2486, 1985.

Carter, W.A., Swartz, IFL and Gillespie, D.H. Independent evolution of antivital and growth modulating activities of interferon. J. Biol. Response Modifiers, 4: 447-459, 1985.

Carter, W.A., Hubbell, H.R., Krueger, L. and Strayer, D.R. Comparative studies of ampligen (mismatched double-stranded RNA) and interferons. J. Biol. Response Modifiers, 4: 613-620, 1985.

Carter, W.A., Strayer, D.S., Hubbell, H.R. and Brodsky, I. Preclinical studies with Ampligen7 (mismatched double-stranded RNA). J. Biol. Response Modifiers, 4: 495-502, 1985.

Brodsky, I., Strayer, D.S., Krueger, L.J. and Carter, W.A. Phase I clinical trials of Ampligen7 (mismatched double-stranded RNA). J. Biol. Response Modifiers, 4: 669-675, 1985.

Suhadolnik, R.J., Reichenbach, N.L., Lee, C., Strayer, D.R., Brodsky, I. and Carter, W.A. Ampligen7 treatment of renal cell carcinoma: Changes in 2-5A synthetase, 2-5A oligomer size and natural killer cell activity associated with antutumor response clinically. Prog. Clin. Biol. Res. 202: 449-456, 1985.

Strayer, D.R., Weisband, J., Carter, W.A., Black, P., Nidzgorski, F. and Cook, A.W. Growth of astrocytomas in the human tumor clonogenic assay and sensitivity to mismatched dsRNA and iterferons. Amer. J. Clin. Oncol. 10: 281-284, 1986.

Strayer, D.R., Carter, W.A., and Brodsky, I. Familial occurrence of breast cancer is associated with reduced natural killer cytotoxicity. Breast Cancer Res Treat., 7: 187-192, 1986.

Strayer, D.R., Weisband, J., Carter, W.A., and Brodsky, I. Antiproliferative effect of mismatched double-stranded RNA (Ampligen7) on fresh human tumor cells analyzed in a clonogenic assay. J. Interferon Res., 6: 373-379, 1986.

Cook, A.W., Nidzgorski, F., Came, P., Mann, G., Carter, W.A. and Roane, P.R., Serum protein masking of the thermal sensitivity of the antiviral activity of purified human beta interferon: Implications for clinical studies. J. Biol. Resp. Modifiers 5: 499-503, 1986.

Cook, A.W., Nidzgorski, F., Roane, P.R., Mann, G., Came, P. and Carter, W.A. Human non-malignant and malignant brain tumor derived cell cultures proliferation and sensitivity to natural human fibroblast (beta) interferon. J. Neuro-Oncol. 4: 337-344, 1987.

Mitchell, W.M., Montefiori, D.C., Robinson, W.E., Strayer, D.R., and Carter, W.A. Mismatched double-stranded RNA (Ampligen7) reduces concentration of zidovudine (azidothymidine) required for in vitro inhibition of human immunodeficiency virus. Lancet, i: 890-892, 1987.

Carter, W.A., Strayer, D.R., Brodsky, I., Lewin, M., Pellegrino, M.G., Einck, L., Henriques, H.F., Simon, G.L., Parenti, D.M., Scheib, R.G., Schulof, R.S., Montofiori, D.C., Robinson, W.E., Mitchell, W.M., Volsky, D.J., Paul, D., Paxton, H., Meyer, W.A., Kariko, K., Reichenbach, N., Suhadolnik, R.J. and Gillespie, D.H. Clinical immunological and virological effects of ampligen7, a mismatched double-stranded RNA, in patients with AIDS or AIDS-related complex. Lancet i: 1286-1292, 1987.

Hubbell, H.R., Pequignot, E.C., Todd, J., Raymond, L.C., Mayberry, S.D., Carter, W.A. and Strayer, D.R. Augmented antitumor effect of combined human natural interferon alpha and mismatched double-stranded RNA treatment against a human malignant melanoma xenograft. Journal of Biological Response Modifier, 6:525-536, 1987.
Strayer, D.R., Weisband, J., Carter, W.A., Black, P., Nidzgorski, F., and Cook, A.W. Growth of astrocytomas in the human tumor clonogenic assay and sensitivity to mismatched dsRNA and interferons. Am. J. Clin. Oncol., 10: 281-284, 1987.

Hubbell, H.R., Pequignot, E.C., Shanabrook, K.R., Carter, W.A., Williams, R.D. and Strayer, D.R. Differential effects of human natural interferon-alpha and mismatched double-stranded RNA against a human renal cell carcinoma xenograft. Anticancer Research, 10: 795-802, 1990.

Strayer, D.R., Carter, W.A., Pequignot, E., Topolsky, D., Brodsky, I., Suhadolnik, R.J., Reichenbach, N., Paul, D., Einck, L., Hubbell, H.R., Pinto, A., Strauss, K. and Gillespie, D. Activity of Ampligen7 in HIV disease. Clinical Biotechnology, 3:169-175, 1991.

Carter, W.A., Ventura, D., Shapiro, D.E., Strayer, D.R., Gillespie, D.H. and Hubbell, H.R. Mismatched double-stranded RNA, Ampligen7 (poly(I):poly(C_{12}U), demonstrates antiviral and immunostimulatory activities in HIV disease. International Journal of Immunopharmacology, 13:259-264, 1992.

Hubbell, H.R., Vargas, H.E., Tsujimoto, K.L., Gibson, G.D., Pequignot, E.C., Bigler, R.D., Carter, W.A. and Strayer, D.R. Antitumor effects of interleukin-2 and mismatched double-stranded RNA, individually and in combination, against a human malignant melonoma xenograft, Cancer Immunology and Immunotherapy, 35:151-157, 1992.

Carter W.A., Suhadolnik, R.J., Muller, W.E.G., Korba, B.E., Hubbell, H.R., Garcia, G. and Strayer, D.R. Specific RNA drug therapy of hepatitis viruses. Annals of the New York Academy of Sciences, 685:758-761, 1993.

Strayer, D.R., Carter, W.A., Brodsky, I., Cheney, P., Peterson, D., Salvato, P., Thompson, C., Loveless, M., Shapiro, D.E., Elsasser, W. and Gillespie, D.H. A controlled clinical trial with a specifically configured RNA drug, Poly(I):Poly(C_{12}U), in chronic fatigue syndrome. Clinical Infectious Diseases, 18(Suppl 1):S88-95, 1994.

Suhadolnik, R.J., Reichenbach, N.L., Hitzges, P., Sobol, R.W., Peterson, D.L., Henry, B., Ablashi, D.V., Muller, W.E.G. and Strayer, D.R. Upregulation of the 2-5A synthetase/RNase L antiviral pathway associated with chronic fatigue syndrome. Clinical Infectious Diseases, 18(Suppl 1):S96-104, 1994.

Gillespie, D., Hubbell, H.R., Carter, W.A., Crumpacker, C., Midgette, P., Elsasser, W., Bryan R. and Strayer, D.R. Synergistic inhibition of AZT-resistant HIV by AZT combined with poly(I):poly(C_{12},U), without synergistic toxicity to bone marrow progenitor cell elements. In Vivo, in press, 1994.

Suhadolnik, R.J., Reichenbach, N.L., Hitzges, P., Adelson, M.E., Peterson, D.L., Cheney, P., Salvato, P., Thompson, C., Loveless, M., Strayer, D.R. and Carter, W.A. Changes in the 2-5A synthetase/RNase L antiviral pathway in a controlled clinical trial with Poly(I):Poly(C_{12}U) in chronic fatigue syndrome. In Vivo, in press, 1994.
Strayer, D.R., Gillespie, D., Carter, W., Strauss, K.I., Brodsky, I., Suhadolnik, R.J., Ablashi, D., Henry, B., Mitchell, W.M., Bastien, S. and Peterson, D. Long term improvements in patients with chronic fatigue syndrome treated with Ampligen. Journal of the Chronic Fatigue Syndrome, in press, 1994.

Strayer, D.R., Brodsky, I., Polansky, M., Pequignot, E.C., Breaux, E., Shapiro, D.E., Carter, W.A. and Hubbell, H.R. A phase I/II study of poly(I):poly(C_{12}U) (Ampligen7) treatment of metastatic renal cell carcinoma: Survival, time to progression and safety of high dose vs. low dose therapy, Submitted, Cancer, 1994.

Thompson, K.A., Strayer, D.R., Salvato, P.D., Thompson, C.E., Klimas, N., Molavi, A., Hamill, A.I., Zheng, Z., Ventura, D. and Carter, W.A. Activity of a double-stranded RNA drug (polyI:poly C_{12}U) - Ampligen7) in the treatment of HIV disease: Results of a double-blind, placebo-controlled study. Clinical Infectious Diseases, submitted, 1994.

Strayer, D.R., Witman, P.A., Thompson, K.A., Salvato, P.D., Thompson, C.E., Klimas, N., Molavi, A., Hamill, A.I., Ventura, D. and Carter, W.A. Safety of a double-stranded RNA drug (poly I:poly C_{12}U - Ampligen7) in the treatment of HIV disease: Results of a double-blind, placebo-controlled study. Clinical Infectious Diseases, submitted, 1994.

Abstracts:

McCarthy, K.S., Carter, W.A. and Laszlo, J. Evidence of protein synthetic capacities of liver nuclear subfractions. Fed. Proc., 24: 484, 1965.

Carter, W.A. and Levy, H.B. Interferon and mengo virus polysomes in L cells. Fed. Proc., 25: 491, 1966.

Levy, H.B., Carter, W.A., Buckler, C.E., Snellbaker, R.F. and Baron, S. The action and induction of interferon. Bact. Proc., 119, 1966.

Carter, W.A. and Levy, H.B. The effect of interferon on the interaction of viral rna with ribosomes. Fed. Proc., 26: 363, 1967.

Levy, H.B. and Carter, W.A. The effect of interferon on the assembly of the mengo ploysome. Seventh International Congress of Biochemistry, Tokyo, 1967.

Carter, W.A. and Levy, H.B. Molecular basis of interferon action. Clin. Res., 16: 328, 1968.

Levy, H.B. and Carter, W.A. Subribosomal particle protein synthesis induced by homologous interferon. Fed. Proc., 27: 561, 1968.

Carter, W.A., Hande, K.R., Essien, B. and Kaback, M.M. Synthesis of interferon by human fetal, neonatla, and maternal cells. Clin. Res., 17: 607, 1969.

Carter, W.A. Interferon: Evidence of subunit structure. Fed. Proc., 29: 635, 1970.

Pitha, P. and Carter, W.A. Interferon: Structural requirements of ribopolymer inducers and polybasic enhancers. Bact. Proc., 155, 1970.

Carter, W.A. and Pitha, P. Human Interferon: Synthesis and subunit structure. Clin. Res., 18: 535, 1970.

Broclcman, W.W., Carter, W.A., Li, L.H., Reusser, F. and Nichol, F.R. Inhibition of RNA tumor virus "reverse transcriptase" by the streptovaricins. Bact. Proc., 221, 1971.

Carter, W.A., Pitha, P.M., Marshall, L.W., Brockman, W.W. and Borden, E.C. Human interferon: Further characterization of oligomeric forms. Bact. Proc., 213, 1971.

Carter, W.A., Brockman, W.W., Li, L.H., Reusser, F. and Nichol, F.R. Selective inhibition of RNA tumor virus "reverse transcriptase" by the streptovaricins. Clin. Res. 19: 490, 1971.

Carter, W.A., Brockman, W.A. and Borden, E.C. Effects of streptovaricins on functions of oncogenic RNA viruses. Second International Virologic Congress, Budapest, 1971.

Carter, W.A., Pitha, P.M. and Marshall, L.W. Interferon: Further characterization of oligomeric forms. Second International Virologic Congress, Budapest, 1971.

Carter, W.A., Pitha, P.M. and Marshall, L.W. Interferon: Further characterization of oligomeric forms. International Colloquium on Interferon and Interferon Inducers, Leuven, 1971.

Pitha, P.M., Carter, W.A. and Pitha, J. Antivital resistance produced by the polyinosinic acid-poly (1-vinylcytosine) complex. International Colloquium on Interferon Inducers, Leuven, 1971.

Carter, W.A., Brockman, W.W. and Borden, E.C. Effects of streptovaricins on functions of oncogenic RNA viruses. Third Annual Tumor Virus Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, 1971.

Carter, W.A., Pitha, P.M., Brockman, W.W., Borden, E.C. and Marshall, L.W. Streptovaricin and interferon: Selective inhibitors with cooperative antivital function. Eleventh Interscience Conference on Antimicrobial Agents and Chemotherapy, Atlantic City, 1971.

Carter, W.A., Borden, E.C. and Brockman, W.W. Interferon and streptovaricin: Antivitals with complementary effects. Symposium on Mammary Neoplasia, Cherry Hill, New Jersey, 1971.

Pitha, P.M., Carter, W.A., Marshall, L.W., Tazawa, I., Tazawa, S. and Ts'o, P.O.P. Structural requirements of the $rI_n.rC_n$ complex for induction of human interferon. Fed. Proc., 31: 408, 1972.

Carter, W.A., Pitha, P.M., Marshall, L.W., Tazawa, I and Ts'o, P.O.P. Induction of human interferon by Poly rIrC: The effect of small nucleotide fragments and "loops" on antiviral activity. Proc. Am. Assn. Cancer Res., 13: 71, 1972.

Marshall, L.W., Carter, W.A., Pitha, P.M., Tazawa, I. and Ts'o, P.O.P. Structural requirements of polynucleotides for induction of human interferon. Bact. Proc., 1972.

Carter, W.A., Pitha, P.M., Marshall, L.W., Tazawa, I., Tazawa, S. and Ts'o, P.O.P. Structural requirements of the $RI_n.rC_n$ complex for induction of human interferon. IV International Biophysics Congress, Moscow, U.S.S.R., 1972.

Carter, W.A., Pitha, P.M., Marshall, L.W., Tazawa, I. and Ts'o, P.O.P. Human interferon induction by synthetic polymers: The effects of small nucleotide fragments and "loops" on antiviral activity. Clin. Res., 20: 526, 1972.

Carter, W.A., Marshall, L.W., Schechtman, L.M. and Ts'o, P.O.P. Human interferon induction: The effects of "loops" on antiviral acticity and toxicity of synthetic ribopolymers. Clin. Res., XXI: 594, 1973.

Carter, W.A., Marshall, L.W., Schechtman, L.M. and Ts'o, P.O.P. Human interferoninduction: The effects of "loops" on antiviral activity and toxicity of synthetic ribopolymers. Bact. Proc., 251, 1973.

Byrd, D.M., Borden, E.C., Horoszewicz, J.S., Pothier, L. and Carter, W.A. The effects of streptovaricin on functions of rna tumor viruses. Proc. Am. Assn. Cancer Res., 14: 25, 1973.

Borden, E.C. Lichtenstein, J., Carter, W.A., Sensenbrenner, L.L., Owens, A.H. Inhibition by streptovaricin (Sv) of rauscher leukemia virus (RLV) splenomegaly. Thirteenth
Interscience Conference on Antimicrobial Agents and Chemotherapy, Washington, D.C., 1973.

Carter, W.A. and Huang, J. Structural aspects of human interferon. Table Ronde Roussel UCLAF: Control Mechanism in Interferon Formation and Action, Paris, 1973.

Ts'o, P.O.P., Alderfer, J.L., Levy, J., Schechtman, L., Marshall, L.W. O'Malley, J. and Carter, W.A. Structural requirements of the $rI_n.rC_n$ complex for induction of interferon. Table Ronde Roussel UCLAF: Control Mechanism in Interferon Formation and Action, Paris, 1973.

Horoszewicz, J.S., Byrd, D.M., Carter, W.A. and Rinehart, K.L. Inactiviation of friend leukemia virus (FLV) by streptovaricin. Proc. Am. Assn. Cancer Res., 15: 101, 1974.

Carter, W.A., Byrd, D.M. and Horoszewicz, J.S. The colony-forming cell in normal and leukemic hosts: Responses to ansamycin inhibitors of reverse transcriptase. Clin. Res., 22: 485A, 1974.

Byrd, D.M. and Carter, W.A. On the mechanism of the in vivo antiviral effect of streptovaricin complex against rauscher leukemia virus. Bact. Proc.,264, 1974.

Arya, S.K., Carter, W.A., Alderfer, J.L. and Ts'o, P.O.P. Inhibition of RNA-directed DNA polymerase of murine leukemia virus by 2'-O'alkylated polyadenylic acids. Fed. Proc., 33: 1483, 1974.

Arya, S.K. and Carter, W.A. Inhibition of murine RNA tumor viruses by 2'-0'alkylated polyadenylic acids. Fourteenth Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, 1974.

Carter, W., Horoszewicz, J., O'Malley, J., Ts'o, P.O.P. and Marshall, L. Interferon inducers: Relationship of RNA double-strandedness to inducer mitogenicity. Fourteen Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, 1974.

Ts'o, P.O.P., Alderfer, J., Cochran, D., Greene, J., Morry, D., Carter, W., O'Malley, J., Horoszewicz, J. and Marshall, L. Relation between primary structure and biological activities of poly(I).(C). S334, Abstracts of the Annual Meeting of the American Society for Microbiology, 1975.

Davey, M.W., Sulkowski, E. and Carter, W.A. Affinity chromatography of mouse interferon. S337: Abstracts of the Annual Meeting of the American Society for Microbiology, 1975.

O'Malley, J.A., Jankowski, W., Davey, M.W., Horoszewicz, J., Sulkowski, E. and Carter, W.A. Probes of structural differences in human fibroblast and leukocyte interferons. S338: Abstracts of the Annual Meeting of the American Society for Microbiology, 1975.

Horoszewicz, J.S. Leong, S.S. and Czrter, W.A. Differential susceptibility of SfFV and MuLV to ansamycin antibiotics. Proc. Am. Assn. Cancer Res., 16: 153, 1975.

Carter, W.A., O'Malley, J.A., Horoszewicz, J.S. and Huang, J. Selective use of antiviral inhibitors: Interferon, its inducers and blockade of viral reverse transcriptase. Symposium on Cancer and Transplantation in Transplantation Proceedings, VII: No. 2, 1975.

Carter, W.A., Panagos, G.E., O'Malley, J.A., Freeman, A.I., Stutzman, L., Higby, D., Douglass, H., Holyoke, D. and Buffett, R.F. Clinical studies of interferon therapy. Proc. Am. Assn. Cancer Res., 17: 178, 1976.

Milavetz, B.I., Horoszewicz, J.S., Rinehart, Jr., K.L. and Carter, W.A. An immobilized template assay of reverse-transcriptase inhibition by ansamycins. Proc. Am. Assn. Cancer Res., 17: 179, 1976.

Arya, S.K. and Carter, W.A. Polynucleotide inhibition of oncornavirus replication. Proc. Am. Assn. Cancer Res., 17: 187, 1976.

Panagos, G.E., O'Malley, J.A. and Carter, W.A. Interferon molecules in human biologic fluids: Relation of their structural characteristics to their cellular source. Clinical Research, XXIV, 1976.

Jankowski, W.J., Davey, M.W., O'Malley, J.A., Davis, L.R., Sulkowski, E. and Carter, W.A. The characterization of hydrophobic binding sites on human interferons. Abstracts of the Annual Meeting of American Society for Microbiology, page 253, 1976.

Chen, J.K., Jankowski, W.J., O'Malley, J. and Carter, W.A. The nature of the molecular heterogeneity of human leukocyte interferon. Abstracts of the Annual Meeting of American Society for Microbiology, page 253, 1976.

Greene, J., Alderfer, J., Ts'o, P.O.P., O'Malley, J. and Carter, W.A. Subtle structural requirements of the interferon induction receptor to the rI.rC duplex. Abstracts of the Annual Meeting of the American Society for Microbiology, page 253, 1976.

Sulkowski, E., Davey, M.W. and Carter, W.A. Hydrophobic binding sites on human interferons. Annual Meeting of Am. Soc. Biological Chemists, No. 1284, 1976.

Sulkowski, E., Bollin, Jr., E., Jankowski, W.J. and Carter, W.A. Tandem affinity chromatography of hamster and mouse interferons. Fed. Am. Soc. Exper. Biol., 1977.

Leong, S.L., Horoszewicz, J.S. and Carter, W.A. In Vitro Susceptibility of human hemopoietic precursor cells to interferon and anti-leukemic drugs. Proc. Am. Assn. Cancer Res., 18: 204, 1977.

Job, L., Horoszewicz, J.S., Arya, S.K. and Carter, W.A. Differential effects of interferon on human prestatic fibroblasts and epithelial cells. Proc. Am. Assn. Cancer Res., 18: 205, 1977.

Bollin, E., Vastola, K., von Muenchhausen, W., Sulkowski, E. and Carter, W.A. Complete resolution of hamster, mouse and human interferons on blue dextran-agarose. S574: Abstracts of the Annual Meeting of Am. Society for Microbiology, 1977.

Chadha, K.C., Sulkowski, E. and Carter, W.A. Human leukocyte interferon: Binding sites for diverse aromatic ligands. S573: Abstracts of the Annual Meeting of Am. Society for Microbiology, 1977.

Carter, W.A., Panagos, G.E., O'Malley, J.A. and Freeman, A.I. Characterization of molecular forms of serum interferon in man. Clin. Res., 25: 488A, 1977.

Vastola, K., Oleszek, D., Davis, L.R., Jr., Sulkowski, E. and Carter, W.A. Development of selective aromatic ligands for the purification of human lymphoblastoid interferon. Seventeenth Interscience Conference on Antimicrobial Agents And Chemotherapy, New York, 1977.

O'Malley, J.A., Panagos, G.E., Grossmayer, B.J., Sulkowski, E. and Carter, W.A. Molecular heterogeneity of human immune interferon. Seventeenth Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, 1977.

Zarling, J., Sosman, J., Borden, E., Carter, W.A. and Horoszewicz, J. Enhancement of allogeneically induced cytotoxic lymphocyte responses by purified human fibroblast interferon. Proc. Am. Assn. Cancer Res., 19: 108, 1978.

Lin, S., Ts'o, P., Bollin, E., Sulkowski, E., Horoszewicz, J. and Carter, W.A. The effects of interferon (if) on transformed properties of human and syrian hamster tumor cells in culture. Annual Meeting of Am. Society for Microbiology, 1978.

Chadha, K., Schlair, M., Sulkowski, E. and Carter, W.A. Molecular size heterogeneity of human leukocyte interferon. Annual Meeting of American Society for Microbiology, 1978.

Mizrahi, A., Dolce, J., Grossmayer, B., O'Malley, J.A., Sulkowski, E. and Carter, W.A. Human immune interferon: Characterization on concanavalin A-agarose. In Vitro, 14: 387, 1978.

Bollin, E., Sulkowski, E. and Carter, W.A. Physico-chemical characterization of hamster interferon. Fed. Proc.#3032, 1978.

Nemoto, T., Carter, W.A., Dolen, J.G., Holyoke, D. and Horoszewicz, J.S. Human interferons and intralesional therapy of melanoma and breast carcinoma. Proc. Am. Assn. Cancer Res., 20: 246, 1979.

Zarling, J.M., Eskra, L., Horoszewicz, J.S. and Carter, W.A. Activation of human natural killer (NK) cells cytotoxic for human leukemia cells by purified fibroblast interferon. Proc. Am. Assn. Cancer Res., 20: 24, 1979.

Carter, W.A. and Horoszewicz, J.S. Differential activity of purified human fibroblast interferon against human tumor vs. normal diploid cells. Proc. Am. Assn. Cancer Res., 20: 256, 1979.

Horoszewicz, J.S., Dolen, J.G., Holyoke, E., Nemoto, T., Leong, S.S. and Carter, W.A. Purified human fibroblast interferon and clinical trials. Annual Meeting of Am. Society for Microbiology, 1979.

Leong, S.S., Horoszewicz, J.S. and Carter, W.A. Human fibroblast interferon: Antiproliferative activity of crude and purified preparations. Annual Meeting of the Am. Society for Microbiology, 1979.

Carter, W.A. By-passing the 'species barrier.' Animal leukocyte interferons and human cells. J. Hematology and Oncology, 9: 269, 1979.

Horoszewicz, J.S., Leong, S.S. and Carter, W.A. Non-cycling tumor cells and the antiproliferative activity of human fibroblast interferon. J. Hematology and Oncology, 9: 290, 1979.

Horoszewicz, J.S., Leong, S.S., Dolen, J.G., Holyoke, E.D., Karakousis, C., Nemoto, T., Wajsman, L.Z., Freeman, A.I., Aungst, C.W., Henderson, E. and Carter, W.A. Purified human fibroblast interferon and neoplasia: Pharmacokinetic studies and selective antiproliferative properties In Vivo J. Hematology and Oncology, 9: 296, 1979.

Carter, W.A., Nolan, J.P., Dolen, J.G., Leong, S.S., Vladutiu, A.D. and Liebowitz, A.I. Application of purified fibroblast interferon in chronic hepatitis B. virus infection. J. Hematology and Oncology 9: 298, 1979.

Zarling, J.M., Greene, J., Ts'o, P.O.P. and Carter, W.A. Augmentation of human natural killer (NK) cell activity by polyinosinic acid: Polycytidylic acid ($rI_n.rC_n$) and its non-toxic mismatched analogues. Proc. Am. Assn. Cancer Res., 1980.

Kawanishi, H., Carter, W.A., Sheagren, J.N., Greenwood, J.M., MacDermott, R.P. and Ibrahim, M. Effect of human fibroblast interferon on injury of HBs Ag-producing human hepatoma cells in vitro. Proc. Amer. Gastroenterology Assn., 1980.

Lin, S.L., Greene, J.J., Ts'o, P.O.P. and Carter, W.A. Interferon double-stranded RNA mediated growth inhibition in human fibrosarcoma and carcinoma cell lines: Induction of resistance variants which retain sensitivity to $rI_n.rC_n$ toxicity. Proc. Am. Assn. Cancer Res., 22: 236, 1981.

Cook, A.W., Carter, W.A. and Nidzgorski, F. Interferon responses of leukocytes in multiple sclerosis. Neurology, 32: 104, 1982.

Strayer, D.R., Carter, W.A., Mayberry, S.D. and Brodsky, I. The NK cell/interferon system: role in human tumorigenesis. Proceedings of 13th International Cancer Congess, 1982.

Greene, J.J., Lin, S.L., Ts'o, P.O.P. and Carter, W.A. Antiproliferative actions of interferon and double-stranded RNA. Induction of resistant variants in human tumor cell populations. Chemistry and Biology of Interferons: Relationship to Therapeutics, UCLA/Squaw Valley International Symposium, p. 108, 1982.

Strayer, D.R., Carter, W.A., Mayberry, S.D. and Brodsky, I. Role of the NK cell/interferon system in human tumorigenesis. Proc. Am. Society Clin. Oncology, p. 37, 1982.

Strayer, D.R., Carter, W.A., Mayberry, S.D., Pequignot, E. and Brodsky, I. Low NK cell activity in individuals with high family history of cancer. Blood, (Proc. Am. Soc. Hematology), 1982.

Strayer, D.R., Weisband, J. and Carter, W.A. Augmentation of hemin induced differentiation in K562 leukemia cells by a mismatched double-stranded RNA. Blood, Proc. Am. Soc. Hematology) 60: 117a, 1982.

Strayer, D.R., Carter, W.A., Mayberry, S.D. Pequignot, E. and Brodsky, I. Correlation of natural killer cell activity and familial incidence of cancer. Proc. Am. Assn. Cancer Res., San Diego, CA, 1983.

Strayer, D.R., Weisband, J., Carter, W.A. and Brodsky, I. Renal Cell Carcinoma and Leukocyte Interferon: Correlation between Sensitivity in a Clonogenic Assay and Clinical Response. Proc. Am. Society Clin. Oncology, 1983.

Hubbell, H.R., Carter, W.A., Williams, R.D. and Strayer, D.R. Synergistic antitumor effect of interferon alpha and mismatched double-standard RNA on human renal cell carcinoma xenografts in nude mice. American Association for Cancer Research, Toronto, Ontario, Canada, May 9-12, 1984.

Hubbell, H.R., Carter, W.A. and Strayer, D.R. Antitumor effects of interferons alone and in combination with double-stranded RNAs on human bladder tumor xenografts in nude mice. American Association for Cancer Research, Toronto, Ontario, Canada, May 9-12, 1984.

Strayer, D.R., Carter, W.A., Koffler, D. and Brodsky, I. Phase I study of mismatched double-stranded RNA. Proc. Am. Assn. Cancer Res., 1984.

Strayer, D.R., Weisband, J., Carter, W.A. and Brodsky, I. Sensitivity of renal cell carcinoma to natural leukocyte interferon in the human tumor stem cell assay (HTSCA). Fourth Conference on Human Tumor Cloning, p. 39, 1984.

Strayer, D.R., Weisband, J., Carter, W.A. and Brodsky, I. Antiproliferative effect of mismatched double-stranded RNA in the human tumor stem cell assay (HTSCA). Fourth Conference on Human Tumor Cloning, p. 71, 1984.

Ts'o, P.O.P., Miller, P.S. and Carter, WA. Development of chemotherapeutic agents for viral diseases and neoplasia based on nucleic acid chemistry and molecular targeting of drugs. Am. Assoc. for Advancement of Science, 1984.

Strayer, D.R., Carter, W.A., Kieffer, G., Mayberry, S. and Brodsky, I. Phase I Study of mismatched double-stranded RNA (Ampligen7). Proc. Am. Society Clin. Oncology, 1985.

Krueger, LJ., Strayer, D.S., Andryuk, PJ., Kieffer, G.L. and Carter, W.A. Pharmacoldnetic analysis of dsRNA therapy in cancer: measurement of Ampligen7 levels. Proc. Am. Society Clin. Oncology, 1985.

Strayer, D.R., Watson, P., Weisband, J. and Carter, W.A. Synergistic antitumor effect of interferon-alpha and mismatched double-stranded RNA (Ampligen7) in human renal cell carcinoma. Proc. Am. Assn. Cancer Res., 1985.

Strayer, D.R., Weisband J., Carter, W.A. and Brodsky, I. Clinical responses to leukocyte interferon in patients sensitive in vitro using a clonogenic assay. Proc. Am. Assn. Cancer Res., 1985.

Strayer, D.R., Carter, W.A., Nowak, T., and Black, P. Clonogenic assay for testing chemosensitivity of glioblastoma. 8th International Congress of Neurological Surgery, Toronto, 1985.

Krueger, L.J., Strayer, D.R., Andryuk, P.J., Kieffer, G.L. and Carter, W.A. Pharmacokinetic analysis of dsRNA therapy in cancer: Caveat of clonogenic assays. UCLA Symposium, Biochemical and Molecular Epidemiology of Cancer, 1985.

Strayer, D.R., Carter, W.A., Nowak, T., and Black, P. Sensitivity of glioblastomas to a novel double-stranded RNA in a human tumor clonogenic assay (HTCA). UCLA Symposium, Interferons as Cell Growth Inhibitors and Antitumor Factors, Steamboat Springs, Colorado, 1986.

Strayer, D.R., Watson, P., Mayberry, S., and Carter, W.A. Synergistic antitumor effect of interferon-a and mismatched double-stranded RNA against fresh human tumor cells. UCLA Symposium. Interferons as Cell Growth Inhibitors and Antitumor Factors, Steamboat Springs, Colorado, 1986.

Hubbell, H.R., Pequignot, E.C. Shanabrook, Carter, W.A., Williams, R.D., and Strayer, D.R. Potentiated antitumor effects of interferon-α and mismatched double-stranded rna (Ampligen7) in vitro and in vivo. UCLA Symposium, Interferons as Cell Growth Inhibitors and Antitumor Factors, Steamboat Springs, Colorado, April 6-12, 1986.

Strayer, D.R., Suhadolnik, R.J., Brodsky, I., and Carter, W.A. In vivo augmentation of 2-5A synthetase and 2-5A oligomer size in blood lymphocytes by mismatched dsRNA therapy. American Association for Cancer Research, Los Angeles, 1986.

Strayer, D.R., Mayberry, S., Carter, W.A., Pequignot, E., and Brodsky, I. Low Natural Cytotoxicity in Normal Individuals with Familial Occurrence of Breast Cancer. American Association for Cancer Research, 27:353, 1986.
Carter, W.A., Strayer, D.R., Reichenbach, N.L., Suhadolnik, R.J., Kariko, K. and Bodner, A. Ampligen7 Inhibits HTLV-III (AIDS VIRUS) By Restoring the Cell's Natural Antivital Defense Mechanism. American Association for Cancer Research, 27:426, 1986.

Strayer, D.R., Carter, W.A., Crilley, P., Pologruto, D., and Brodsky, I. Phase I Study of Mismatched Double-Stranded RNA (Ampligen7). American Assocation for Cancer Research, 27:209, 1986.

Hubbell, H.R., Eppright, B.M., Pequignot, E.C., Todd, J., Raymond, L., Mayberry, S.D., Carter, W.A., and Strayer, D.R. Augmented antitumor effect of combined human natural alpha interferon (α-IFN) and mismatched double-stranded RNA (Ampligen7) treatment against a human melanoma xenograft. Seventy-Seventh Annual Meeting of the American Association for Cancer Research, Los Angeles, California, May 7-10, 27:322, 1986.

Hubbell, H.R., Kariko, K., Sobol, R.W., Jr., Pornbanlualap, S., Li, S.-W., Suhadolnik, L., Reichenbach, N.L., Gillespie, D.H., Carter, W.A., Brodsky, I., Sheetz, P. and Suhadolnik, R.J. Human heterogenous nuclear RNA-activated 2-5A synthetase produces biologically active 2-5A. Annual Meeting of the American Society of Biological Chemists, Philadelphia, Pennsylvania, June 7-11, 1986.

Strayer, D.R., Watson, P., Mayberry, S., Brodsky, I., Carter, W.A. Synergism between natural interferon-α and a novel mismatched double-stranded RNA produced an antiproliferative effect against fresh human tumor cells. Proceedings of the American Society of Clinical Oncology, 5:230, 1986.

Hubbell, H.R., Tsujimoto, K.L., Raymond, L.C., Todd, J., Pequignot, E.C., Bigler, R.D., Carter, W.A. and Strayer, D.R. Potentiated antitumor and immunomodulatory effects of rIL-2 and mismatched dsRNA (Ampligen7) in vivo. Abstracts, Seventy-Eighth Annual Meeting of the American Association for Cancer Research, Atlanta, Georgia, May 20-23, 28:370, 1987.

Strayer, D.R., Carter, W.A., Crilley, P., Novak, S., and Brodsky, I. Phase I-II study of mismatched double-stranded RNA (Ampligen7) in combination with interferon-alpha(Le). American Association for Cancer Research, Atlanta, Georgia, May 20-23, 28:382, 1987.

Gillespie, D.H., Lewin, M., Pellegrino, M., Meyer, W., III, Einck, L., Strayer, D.R., Brodsky, I. and Carter, W.A. Reduction in human immunodeficiency virus (HIV) load in ARC/AIDS patients following treatment with poly(I):poly(C_{12}U) (Ampligen7). American Association for Cancer Research, 28:455, 1987.

Hubbell, H.R., Sheetz, P., Gillespie, D.H., Carter, W.A., Kariko, K., Sobol, R.W. Jr., Pornbanlualap, S., Li, S.-W., Suhadolnik, L., Reichenbach, N.L. and Suhadolnik, R.J. Natural, nuclear double-stranded RNAs (dsRNAs) can activate dsRNA-dependent 2',5'A synthetase. Abstracts, Seventy-Eighth Annual Meeting of the American Association for Cancer Research, Atlanta, Georgia, May 20-23, 1987.

Strayer, D.R., Carter, W.A., Crilley, P., Novak, S. and Brodsky, I. Complete clinical responses in solid tumor patients without side effects or toxicity using mismatched double-stranded RNA (Ampligen7). American Society for Clinical Oncology, 6:240, 1987.

Strayer, D.R., Carter, W.A., Brodsky, I., Einck, L., Simon, G.L., Schulof, R.S. and Henriques, H.F. Clinical improvement of patients with HIV-related immune dysfunction on mismatched dsRNA (Ampligen7) therapy. UCLA Symposium, Human Retroviruses, Cancer and AIDS: Approaches to Prevention and Therapy, Keystone, 1987.

Strayer, D.R., Carter, W.A., Einck, L., Mansell, P., Henriques, H.F., Schulof, R.S., Simon, G.L., and Brodsky, I. HIV related immune dysfunction: Clinical improvement and immunological/virological effects of Ampligen7 therapy. American Society of Hematology, Washington, D.C., 70:127a, 1987.

Brodsky, I., Carter, W.A., Suhadolnik, R.J., Talpaz, M., Gutterman, J., and Strayer, D.R. Hematological remissions in CML patients treated with interferon-alpha (IFN-α) in combination with mismatched dsRNA (Ampligen7). American Society of Hematology, Washington, D.C., 70:223a, 1987.

Mitchell, W.M., Montefiori, D.C., Robinson, W.E., and Carter, W.A. Mismatched double-stranded RNA (Ampligen7) protects target cells from HIV infection and reduces the concentration of 3'-azido-3'deoxythymidine (AZT) required for virustatic activity. III International Conference on AIDS, Washington, DC (Abs. MP5); Ibid. International Virology Congress, Edmonton, Alberta, Canada, 1987.

Hubbell, H.R., Kariko, K., Sobol, R.W., Jr., Pornbanlualap, S., Li, S.-W., Suhadolnik, L., Reichenbach, N.L., Gillespie, D.H., Carter, W.A., Brodsky, I., Sheetz, P. and Suhadolnik, R.J. Human heterogeneous nuclear RNA-activated 2-5A synthetase produces biologically active 2-5A. Abstracts, Annual Meeting of the American Society of Biological Chemists, Philadelphia, Pennsylvania, June 7-11, 1987.

Hubbell, H.R., Vargas, H., Gibson, G., Tsujimoto, K., Pequignot, E., Bigler, R., Murasko, D., Carter, W. and Strayer, D.R. Non-T-cell mediated immune augmentation and tumor growth inhibition by rIL-2 and mismatched double-stranded RNA. Abstracts, Second Conference on Immunity to Cancer, Williamsburg, Virginia, November 9-11, 1987.

Cook, A.W., Boyer, J.E., Burch, R.M., Roane, P., Carter, W.A. and Hubbell, H.R. Non-interferon associated mechanisms of antiproliferative action of mismatched double-stranded RNA (Ampligen7). Abstracts, Seventy-Nineth Annual Meeting of the American Association for Cancer Research, New Orleans, Louisiana, May 25-28, 1988.

Mitchell, W.M., Strayer, D.R., Schulof, R.S., Mansell, P., Montefiori, D.C., Simon, G.L., Brodsky, I., Robinson, W.E., Jr., Henriques, H.F., Einck, L., Gillespie, D.H. and Carter, W.A. The activity of mismatched double-stranded RNA (Ampligen7) as an antiviral and immunomdoulating agent in HIV-induced disease. International Symposium: Basic and Clinical Approaches to Virus Chemotherapy, Helsinki, Finland, 1988.

Strayer, D.R., Brodsky, I., Einck, L., Miller, S.M., Mansell, P., Henriques, H.F., Parenti, D.M., Schulof, R.S., Simon, G.L., Paxon, H., Meyer, W.A., Paul, D., Grillo-Lopez, A.G. and Carter, W.A. Ampligen7 therapy in ARC/pre-ARC: Immune/virological effects and clinical improvement. IV International Conference on AIDS, 231, 1988.

Strayer, D.R., Carter, W.A., Einck, L., Mansell, H.F., Henriques, H.F., Schulof, R.S., Simon, G.L., and Brodsky, I. Clinical and immunological/virological effects of Ampligen7 therapy in ARC/pre-ARC patients. American Society of Clinical Oncology, 7:2, 1988.

Strayer, D., Gillespie, D., Peterson, D., Cheney, P., Salvato, P., Loveless, M., Fletcher, M., Klimas, N., Patarca, R., Suhadolnik, R., Walters, D. and Carter, W. Treatment of chronic fatigue immune dysfunction syndrome with poly(I):poly(C_{12}U). 31st Interscience Conference on Antimicrobial Agents and Chemotherapy, September 29-October 2, 1991.

Strayer, D.R., Hubbell, H.R., Carter, W.A., Pequignot, E., Polansky, M., Shapiro, D., Breaux, L., and Brodsky, I. A phase I-II study of Ampligen7 treatment of metastatic renal cell carcinoma: Comparison of treatment with low dose vs. high dose. Second International Symposium on the Immunobiology of Renal Cell Carcinoma, Cleveland, Ohio, October 21-22, 1991.

Strayer, D.R., Hubbell, H.R., Carter, W.A. and the CFS Consortium Group. Double-stranded (ds) RNA drug therapy in chronic viral and immunologic disorders. Fifth International Antiviral Symposium: Second Korean-American AIDS Symposium, Seoul, Korea June 21-25, 1992.

Carter, W.A., Suhadolnik, R.J., Korba, B.E., Hubbell, H.R. and Strayer, D.R. RNA drug therapy of hepatitis viruses. Third International Conference on Drug Researc in Immunologic and Infectious Diseases. Immunomodulating Drugs: Synthesis, Preclinical and Clinical Evaluation, Washington, D.C., June 27-July 1, 1992.

Gillespie, D.H., Hubbell, H.R., Carter, W.A., Midgette, P., Elsasser, W., Bryan, R. and Strayer, D. Inhibition of AZT-resistant HIV by Ampligen7, without synergistic toxicity. VIII International Conference on AIDS, Amsterdam, Netherlands, July 19-24, 1992.

Book Sections:

Levy, H.B. and Carter, W.A. The Molecular Basis of Interferon Action. In Ciba Foundation Symposium on Interferon, ed. by F.E.W. Wolstenholme and Maeve O'Connor, J.E.A. Churchill Ltd., London, 1967, pp. 160-178.

Levy, H.B. and Carter, W.A. The Action of Interferon. In 2nd Int. Symp. Med. and App Virol., ed. by M. Saunders and E.H. Lennett. Warren H. Green, Inc., St. Louis, 1968.

Levy, H.B. and Carter, W.A. Mechanism of Action of Interferon. In The Interferons, ed. by Geo. Rita, Academic Press, New York, 1968, pp. 95-110.

Carter, W.A. and Pitha, P.M. Structural Requirements of Ribopolymers for Induction of Human Interferon: Evidence for Interferon Subunits. In Biological Effects of Polynucleotides, ed. by R.F. Beers, Jr. and W. Braun, Springer-Verlag, New York, 1971, pp. 89-105.

Carter, W.A., Brockman, W.W. and Borden, E.C. Effects of Streptovaricins on Functions of Oncomaviruses. In International Virology 2, ed. by J.L. Melnick, S. Karger (Basel, Munchen, Paris, London and Sydney), 1972, p. 298.

Carter, W.A., Pitha, P.M. and Marshall, L.W. Oligomeric Forms of Interferons. In International Virology 2, ed. by J.L. Melnick, S. Karger (Basel, Munchen, Pans, London and Sydney), 1972, p. 303.

Carter, W.A., Marshall, L.W. and Pitha, P.M. Physics-Chemical Studies of Human Interferons Produced by Leukocytes and Fibroblasts. In 2nd Intern. Symposium on Erythrocytes, Leukocytes and Thrombocytes, ed. by E. Gerlach, K. Moser, E. Deutsch, and W. Wilmanns, Georg Thieme, Stuttgart, 1973, pp. 385-388.

Carter, W.A., editor: Selective Inhibitors of Viral Functions, Chemical Rubber Company, Cleveland, 1973.

Byrd, D.M. and Carter, W.A. Ansamycins: (B) Streptovaricins. In Selective Inhibitors of Viral Functions, W.A. Carter, ed., Chemical Rubber Company, Cleveland, 1973, pp. 329-347.

Carter, W.A., Buffett, R., Byrd, D., Evans, MJ., Fjelde, A., Horoszewicz, J., Manly, K., Munyon, W., O'Malley, J., Pothier, L. and Ziegel, R. The Regulation of Oncogenic Viruses. In Perspectives in Cancer Research and Treatment, ed. by Gerald P. Murphy, Alan R. Liss, New York, 1973, pp. 291-300.

O'Malley, J.A. and Carter, W.A. Selective Inhibitors of Viral Functions. In Medikon International, 30: 6, 1974.

Carter, W.A., Borden, E.C., Brockman, W.W., Byrd, D., Ligon, W.V., Antosz, R.J. and Rinehart, K.L., Jr. Selective Inhibition of RNA Tumor Virus Function. In Proceedings of the 25th Annual Symposium on Fundamental Cancer Research: Molecular Studies in Viral Neoplasia, M.D. Anderson Press, Williams and Wilkins, Baltimore, 1974, pp. 303-308.

Carter, W.A., Leong, S.S. and Horoszewicz, J.S. Human Fibroblast Interferon in the Control of Neoplasia. In Antivital Mechanisms and the Control of Neoplasia. P. Chandra, editor, Plenum Press, New York, 1978, pp. 663-374.

Horoszewicz, J.S., Leong, S.S. and Carter, WA. Purified Human Fibroblast Interferon and Non-Cycling Tumor Cells. In Interferon Properties and Clinical Uses. A. Kahn, N.O. HiR and G.L. Dorn, eds., Wadley Institute Press, Dallas, 1979, pp. 573-577.

Horoszewicz, J.S., Leong, S.S., Dolen, J.G., Holyoke, E.D., Karakousis, C., Nemoto, T., Wajsman, L.Z., Freeman, A.I., Aungst, C.W., Henderson, E. and Carter, W.A. Purified Human Fibroblast Interferon and Neoplasia: Pharmacokinetic

Studies and Selective Antiproliferative Properties In Vivo. In Interferon Properties and Clinical Uses. A. Kahn, N.O. Hill and G.L. Dorn, eds., Wadley Institute Press, Dallas, 1979, pp. 661-666.

Carter, W.A. and Havell, E.A. By-Passing the 'Species-Barrier' of Mammalian Interferons. In Interferon Properties and Clinical Uses. A. Kahn, N.O. Hill and G.L. Dorn, eds., Wadley Institute Press, Dallas, 1979, pp. 59-62.

Carter, W.A., Dolen, J.G., Leong, S.S., Horoszewicz, J.S., Vladutiu, A.0., Leibowitz, A.L and Nolan, J.P. Interferon and Hepatitis Infection: Current Results and Possible Amplification of the Therapeutic Response. In Interferon Properties and Clinical Uses. A. Kahn, N.O. Hill and G.L. Dorn, eds., Wadley Institute Press, Dallas, 1979, pp. 693-6999.

Cook, A.W., Pertschuck, L.P., Gupta, K., Nidzgorski, F., Carter, W.A., Horoszewicz, J.S., Marcus, E.L., and Kim, D.S. The Effect of Antivital Agents on Jejunal Immunopathology in Amyotrophic Lateral Sclerosis. In Progress in Neurological Research. P.O. Behan and F.C. Rose, eds., Pitman Medical Press, Kent, England, 1980, pp. 62-72.

Carter, W.A., Dolen, J.G., Horoszewicz, J.S., Leong, S.S., Vladutiu, A.0., Leibowitz, A.I. and Nolan, J.P. Purified Human Fibroblast Interferon and Hepatitis B Infection: Effect on Viral Functions and Host Ir=une Response. In Proc. 2nd International Workshop on Interferons. V.G. Edy, M. Krim, H. Oettgen and W.E. Stewart II, eds., Rockefeller Univ. Press, New York, 1980.

Ts'o, P.O.P., Greene, J.J., Leong, S.S., Horoszewicz, J.S. and Carter, W.A. Mismatched Analogues of Polyinosinic Acid-Polycytidylic Acid: Preserving Interferon Induction with Reduction of Secondary Effects. In Proc. 2nd International Workshop on Interferons. V.G. Edy, M. Krim, H. Oettgen and W.E. Stewart II, eds., Rockefeller Univ. Press, New York, 1980.

Horoszewicz, J.S., Leong, S.S., Dolen, J.G., Holyoke, E., Karakousis, C., Nemoto, T. and Carter, W.A. Purified Human Fibroblast Interferon: A Selective Antiproliferative Effect on Certain Human Tumors. In Proc. 2nd International Workshop on Interferons. V.G. Edy, M. Krim, H. Oettgen and W.E. Stewart H, eds., Rockefeller Univ. Press, New York, 1980.

Zarling, J.M., Borden, E.C., Horoszewicz, J.S. and Carter, W.A. Lysis of Human Leukemic Cells by Interferon Activated Natural Killer Cells. In Proc. 2nd International Workshop on Interferons. V.G. Edy, M. Krim, H. Oettgen and W.E. Stewart 11, eds., Rockefeller Univ. Press, New York, 1980.

Carter, W.A. Purification of Interferons on Albumin Immobilized on Agarose. In Methods in Enzymology, (volume 78). S. Pestka, volume ed., Academic Press, New York, 1981, pp. 576.

Carter, W.A. and Johnson, F.J. Induction and Production of Interferon with Porcine, Bovine and Equine Leukocytes. In Methods in Enzymology, (volume 78). S. Pestka, volume ed., Academic Press, New York, 1981, pp. 48-54.

Carter, W.A. Strayer, D.R., Gillespie, D.H., Brodsky, I., Greene, J.J. and Ts'o, P.O.P. Poly IC with Mismatched Bases, Prospects for Cancer Therapy. In Augmenting Agents in Cancer Therapy: Current Status and Future Prospects. M. Chirigos and E.M. Hersh (eds.), Raven Press, New York, 1981, pp. 177-183.

Strayer, D.R., Carter, W.A., Brodsky, I., Gillespie, D.H., Greene, J.J. and Ts'o, P.O.P. Clinical Studies with Mismatched Double-Stranded RNA. In The Interferon System: A Current Review, (Part 2), Texas Reports on Biology and Medicine, Vol. 41, S. Baron and F. Dianzani, eds., Univ. Texas Medical Branch publishers, Galveston, Texas, 1982, pp. 663-671.

Gillespie, D., and Carter, W.A. Species Specificity of Interferon. In The Interferon System: A Current Review (Part 1), Texas Reports on Biology and Medicine, vol. 41, S. Baron, F. Dianzani and G.J. Stanton, eds., Univ. Texas Medical Branch publishers, Galveston, Texas, 1982, pp. 37-42.

Came, P.E. and Carter, W.A. Interferon, its Application and Future as an Antitumor Agent. In Anticancer and Interferon Agents, R.M. Ottenbrite and G.B. Butler, eds., Marcel Dekker, New York, 1984, pp. 301-319.

Gillespie, D., Pequignot, E., and Carter, W.A. Evolution of Interferon Genes. In Handbook of Experimental Pharmacology on Interferons, P. Came and W.A. Carter, eds., Springer-Verlag, New York and Heidelberg, 1984, pp. 45-63.

Strayer, D. and Carter, W.A. Agents which Modulate the Activity of Interferon. In Handbook of Experimental Pharmacology on Interferons, P. Came and W.A. Carter, eds., Springer-Verlag, New York, 1984, pp. 385-402.

Greene, J.J., Ts'o, P.O.P., Strayer, D.R. and Carter, W.A. Therapeutic Applications of Double-Stranded RNA's. In Handbook of Experimental Pharmacology on Interferons, P. Came and W.A. Carter, eds., Springer-Verlag, New York and Heidelberg, 1984, pp. 535-555.

Carter, W.A. and Horoszewicz, J.S. Production, Purification and Clinical Application of Human Fibroblast Interferon. In International Encyclopedia of Pharmacology and Therapeutics, S. Pestka, ed., Pergamon Press Ltd., Great Britain, 1984.

Strayer, D.R., Weisband, J., Carter, W.A. and Brodsky, I. Sensitivity of Renal Cell Carcinoma to Leukocyte Interferon in the Human Tumor Clonogenic Assay and Clinical Correlations. In Human Tumor Cloning, S.S. Salmon and J.M. Trent, eds., Grune and Stratton Press, New York and London, 1984, pp. 585-593.

Carter, W.A., Strayer, D.S. Brodsky, I. and Ts'o, P.O.P. Recent Advances in Medical Oncology with Special Reference to Human Interferon Systems. In Proceedings of the Second Symposium on Recent Advances in Biological and Medical Sciences (sponsored by Chinese Academy of Sciences) Taipei, Republic of China, 1984, pp 59-65.

Came, P.E. and Carter, W.A. Clinical Use of Interferons in the Treatment of Viral Infections. In Mechanisms of Interferon Actions, L.M. Pfeffer, ed., Chemical Rubber Company Press, 1985.

Suhadolnik, R., Reichenbach, N.L., Lee, C., Strayer, D., Brodsky, I., and Carter, W.A. Ampligen Treatment of Renal Cell Carcinoma: Changes in 2-5A Synthetase, 2-5A Oligomer Size, and Natural Killer Cell Activity are Associated with Clinical Antitumor Response, In: The 2-5A System: Molecular and Clinical Aspects of the Interferon Regulated 2-5A System, Williams BRG, and Silverman, RH, (eds), Alan R. Liss, Inc., New York, NY, pp. 449-456, 1985.

Suhadolnik, R.J., Reichenbach, N.L., Lee, C., Strayer, D.R., Brodsky, I. and Carter, W.A. Ampligen7 Treatment of Renal Cell Carcinoma: Changes in 2-5A Synthetase, 2-5A Oligomer Size and Natural Killer Cell Activity Associated with Antitumor Response Clinically, In: The 2-5A System: Molecular and Clinical Aspects of the Interferon-Regulated Pathway, Williams, B.R.G. and Silverman, R., eds. pp. 449-456, A.R. Liss, Inc., New York, 1986.

Strayer, D.R., Brodsky, I., Pequignot, E.C., Crilley, P.A., Carter, W.A., Fenning, R., Kariko, K., Reichenbach, N.L., Sobol, R.W., Li, S.W. and Suhadolnik, R.J. The Antitumor Activity of Ampligen7, a Mismatched Double Stranded RNA, Which Modulates the 2-5A Synthetase/ RNase L Pathway in Cancer and AIDS, Diasio, R.B., and Sommadossi, J.P., eds., Pergamon Press, Inc., New York, pp. 23-31, 1990.

Suhadolnik, R.J., Reichenbach, N.L., Sobol, R.W., Varnum, J.M., Hart, R.B., Peterson, D.L., Strayer, D.R., Henry, B., Ablashi, D.V., Gillespie, D.H. and Carter, W.A. Biochemical Defects in the 2-5A Synthetase/RNase L Pathway Associated with Chronic Fatigue Syndrome with Encephalopathy, In: Proceedings of the Cambridge Symposium on Myalgic Encephalomyelitis (Chronic Fatigue Syndrome), B. Hyde ed., The Nightingale Foundation Press, Toronto, 1991.